

REMARKS

Reconsideration and allowance in view of the foregoing amendments and the following remarks are respectfully requested. Claims 1-30 were pending in this application. This amendment cancels claims 6 and 24-30 and adds new claim 31-33. Thus claims 1-5, 7-23, and 31-33 are pending. Claims 1, 4, and 21 are amended.

INTERVIEW SUMMARY

Applicants' representative wishes to thank Examiner Younger for the courtesies extended during the Examiner Interview of May 16, 2006. During that interview, the outstanding Office Action was discussed with respect to the prior art rejections and, in particular, the rejections based on Hugh 6,503,751. Applicants' representative and the Examiner discussed proposed amendments to claim 1 which further define the command responsive closure mechanism as being movable between a closed position substantially closing off the receptacle access opening and an open position whereby the receptacle access opening is unblocked so as to allow a receptacle to be passed through the opening. It was further proposed to amend claim 1 to add the limitation of a sensor to determine the position of the closure mechanism and to indicate whether the door is in the open or closed position. Applicants' representative explained that none of the cited references disclose such a feature. The Examiner suggested that the claim be amended to recite these features

structurally and not functionally, and applicants' representative agreed to consider alternative claim language.

Applicants' representative subsequently forwarded a proposed amendment (without comment) to the Examiner for her review. Examiner Younger advised that she discussed the proposed amendment with her Supervisory Patent Examiner ("SPE"), who suggested that applicant combine claims 1 and 4.

The amendments presented above are substantially the same as the proposed amendment previously sent to Examiner Younger. Applicants continue to believe that the claims as amended are distinguishable from the cited art for the reasons set forth below and respectfully urge Examiner Younger and her SPE to reconsider their position.

CLAIM REJECTIONS - 35 U.S.C. §103

Claims 1, 4-9, 20, and 21 stand rejected under 35 U.S.C. §103 as being unpatentable over U.S. Patent No. 6,503,751 to Hugh ("Hugh"). Claims 1 and 8-23 stand rejected under §103 as being unpatentable over U.S. Patent No. 6,156,565 to Maes ("Maes"). Finally, claims 2, 3, and 24-30 stand rejected under §103 as being unpatentable over Hugh or Maes in view of U.S. Patent No. 5,882,594 to Kawaguchi ("Kawaguchi"). The Office Action explains how the features of the independent claims are purportedly taught in the cited references but includes little or no explanation of where the features of the dependent claims are taught in the cited references.

The rejections are traversed on the grounds that the cited references do not disclose all elements of the rejected claims, and, moreover, on the grounds that there is no motivation to modify the incubators of the cited references to derive the claimed invention.

Claim 1 recites that the command responsive closure mechanism includes a door that is movable between (1) a closed position in which the door cooperates with the housing to substantially close off the receptacle access opening and (2) an open position in which the door is positioned such that the receptacle access opening is unblocked, thereby permitting a reaction receptacle to pass therethrough. Claim 1 further recites sensors operatively associated with the closure mechanism and constructed and arranged to indicate that the door is in the closed position or the open position.

The cited references include no such features. Maes and Kawaguchi simply have no disclosure of a command responsive closure mechanism of any sort and, in particular, do not even disclose a door that is movable between a closed position and an open position in response to closure movement commands and do not disclose sensors for indicating if the door is in the closed or open position.

Similarly, Hugh does not disclose a door that is movable between a closed position and an open position in response to closure movement commands. This was acknowledged in the Office Action. (Office Action at p. 2)

Furthermore, none of the cited references teaches or suggests sensors for indicating that the door is in the closed position or the open position. It is indicated in the Office Action that Hugh discloses a "door position detection circuit" at column 11, line 52 through column 12, line 5. (Office Action at p. 2). More accurately, Hugh discloses a "door open detection circuit." (See column 11, line 53). This circuit does not detect the position of the door; it merely detects if the door is open (by even the smallest amount) or not. Hugh describes the functioning of the door open detection circuit as follows:

The frame of the incubator door 320 is a conductor of a switch circuit, and is isolated from the frame of the incubator whenever the door is open. When the door is closed, door frame 320 electrically contacts the incubator and thereby becomes grounded through a connection 323. A pullup voltage (for example, 5 volts) is applied through a pullup resistor 322 to cause door frame 320 to elevate to the pullup voltage whenever the door is open and not contacting the incubator frame. However, when door frame 320 is contacting the incubator frame, door frame 320 is at a ground potential. Thus, the voltage of door frame 320 is a logic-level signal indicative of whether door frame 320 is in contact with the incubator frame or not, and thus indicates whether the door is open.

(Column 11, lines 53-67).

The door open detection circuit of Hugh does not indicate that the door is in the open position (i.e., open sufficiently to permit a reaction receptacle to pass through the door opening); it merely indicates that the door is not closed.

The present invention includes sensors which indicate that the door is the closed position or the open position, whereby, when the door is open, it is open by a sufficient amount to permit a

reaction receptacle to pass through the receptacle access opening. This is important in an incubator, such as the one claimed, which can be incorporated into an automated analyzer instrument. In such an instrument, a robotic device moves reaction receptacles into and out of the incubator through the access opening. A sensor mechanism for detecting whether the door is in the "open" position helps the instrument's computer controller determine if a receptacle can be moved into or out of the incubator by the robotic device.

Hugh does not include, nor would it ever need, this feature.

It would not be obvious to modify Hugh to incorporate sensors for indicating that the door is open or closed. Similarly, it would not be obvious to incorporate an automated door into the incubator of Hugh, as was suggested in the Office Action. Specifically, it was suggested in the Office Action that it would have been obvious to incorporate automated doors into the incubator of Hugh to "provide the advantage of allowing the incubator to be operated without user intervention and more importantly, to allow the incubator's door to close and shut at the most opportune time, which would allow the apparatus to operate more efficiently." (Office Action at p. 3) Applicants respectfully disagree.

The incubator of Hugh is a chest-like box incubator with a hinged door which comprises substantially the entire front wall of the chest. The incubator is not part of an automated system. A lab technician would manually open the door as far as necessary – and when necessary – to permit the needed access to the shelves. Such a device would not benefit from an automated door,

because there is no need or advantage for the device to operate without user intervention. There is no more motivation to incorporate an automated door into the incubator of Hugh than there is to incorporate an automated door into a kitchen refrigerator.

Similarly, there is no need for a sensor to indicate that the door is sufficiently open to permit an item to be placed into or removed from the incubator; the lab technician can readily determine the amount of door opening that is necessary. Using the same analogy, putting a sensor on Hugh's incubator to indicate that the door is sufficiently open for a receptacle to pass through the door opening makes no more sense than putting a sensor on a kitchen refrigerator to indicate that the door is sufficiently open for a carton of milk to pass through it.

Thus, incorporating a command-responsive closure mechanism or a door position sensor into an incubator would not have been obvious based on the teachings of the cited references, and any suggestion to incorporate such features into the incubators of the cited references is motivated by no more than hindsight reliance on the teachings of the present application.

For the foregoing reasons, applicants respectfully submit that independent claim 1 is patentable over the cited references Hugh, Maes, and Kawaguchi. Thus, applicants respectfully request that the rejection of claim 1 be withdrawn.

Claim 1 is now the only independent claim in this application, as independent claim 24 has been cancelled. Claims 2-5, 7-23, and 31-33 depending from claim 1 are believed to be allowable as being dependent from an allowable independent claim.

Furthermore, dependent claim 3 recites that the receptacle mixing mechanism includes a motor, a shaft, and a disk mounted to the shaft at an acute angle with respect to the longitudinal axis of the shaft. The cited art includes no disclosure of such a receptacle mixing mechanism, nor does the Office Action identify any corresponding disclosure in the cited references. Accordingly, claim 3 is believed to be allowable for this additional reason.

Claim 5 recites that the closure mechanism further comprises a motor for effecting powered rotation of the door. The cited art includes no disclosure of a motorized door. The Maes reference does not disclose a door at all. Furthermore, the Office Action does not identify any disclosure of a motorized door in the cited art. Thus, claim 5 is believed to be allowable for this additional reason.

Dependent claim 7 recites a particular configuration of a door which includes an arcuate closure panel, a hinge plate, and a lower actuating plate. The cited art does not include any teaching of the specific door configuration recited in claim 7, nor does the Office Action identify any such disclosure. Accordingly, claim 7 is believed to be allowable for this additional reason.

Claim 10 recites that the housing includes one or more openings for permitting access to the reaction receptacle to allow fluid transfer to or from the receptacle. None of the prior art references disclose such a feature, nor does the Office Action identify any such disclosure in the cited references. Accordingly, dependent claim 10 is believed to be allowable for this additional reason.

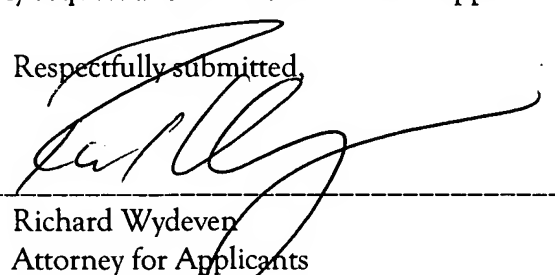
Dependent claim 21 recites that the powered fan mechanism comprises a motorized centrifugal fan located in a central portion of the incubation chamber. The cited art includes no such disclosure of this particular fan arrangement. Maes discloses fans at 637 and 639 but does not disclose whether these fans are centrifugal fans. Moreover, the fans are not located in a central portion of the incubation chamber. Accordingly, claim 21 is believed to be allowable for this additional reason.

Dependent claim 22 recites that the incubator further comprises a receptacle bridge for supporting the bottom surface of the receptacle being transferred through the receptacle access opening. None of the cited references disclose such a structure, nor does the Office Action identify any such disclosure in the references. Accordingly, dependent claim 22 is believed to be allowable for this additional reason.

Based on the foregoing remarks, applicants submit that the instant application is now in condition of allowance and respectfully request allowance of the instant application.

Respectfully submitted,

By


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